

Melvin Butte Forest Management Project

Silviculture Treatment Specifications and Implementation Guidelines Stewardship Imp Units 8,10 Fuels Imp # TBD Feb 14, 2015

Management Allocations:

LRMP: Front Country Seen/Unseen MA 18

NWFP: Matrix

EA Treatment Name: Thinning (Un-evenaged)

Secondary treatments: Underburn (prescribed), pile burning, mastication, pruning

Site Description:

Unit	Acres	Aspect	Slope	Site Index (PIPO)	Plant Assoc. (Volland 1982)
8	6	0-180	0-10	82	CPS214
10	26	0-180	0-10	83	CWS115

Structure:

The structure of the stands in the units are in the Old Forest Multi-stratum phase. Understory shrub component is low as the crown has closed and reduced the manzanita.

Dwarf Mistletoe

The units contain low to high levels of dwarf mistletoe. Most often the infections are in the bottom 1/2 to 1/3rd of the crown. Mistletoe infections may be higher in those trees left from previous stand entry or where infections have spread from these to higher in the crowns of planted trees. The boundaries of the units have some of the highest levels due to the adjacency of infected stands.

Past management-

The stands had selective overstory removal. The past selective removal removed 20-60ft² basal area per acre (BA/acre) of ponderosa pine. Fire suppression of natural and/or human ignitions has occurred from early in the 20th century. Ingrowth has occurred overtime due in large part to fire suppression policy.

Existing condition-

Table 1-Stand statistics derived from Lidar determined tree points.

Stewardship Imp Unit #	Acres	Avg Diameter (inches)	STD Dev Diam (inches)	Quadratic Mean Diameter (inches)	BA/acres (0-4.9"d bh)	BA/acres (5-8.9"d bh)	BA/acres (9-20.9"d bh)	BA/acres (21+" dbh)	BA/acres total	TPA (0-4.9"d bh)	TPA (5-8.9"d bh)	TPA (9-20.9"d bh)	TPA (21+" dbh)	Total Number of trees/acres	Plant Association Group (PAG)	Plant code	Current calculated SDI
8	6	9.2	7.6	11.9	7	20	73	116	217	107	79	62	31	279	Mixed conifer dry	CPS2-14	371
10	26	9.0	7.9	12.0	8	20	64	145	237	131	80	50	40	301	Ponderosa pine dry	CWS1-15	404

Desired Future Condition-

Stands with large old growth ponderosa pine distributed into clumps and individuals. Move units to old forest single stratum (i.e. dominated by a single overstory of old growth ponderosa pine).

Residual trees with little to no dwarf mistletoe and/or highly mistletoe trees being isolated/confined and/or mistletoe allocated to bottom 1/3rd of crown to allow for future pruning. Units with a random distribution of trees indicated by clumps and gaps.

Selected Silvicultural Treatment: Individual tree selection from below for stand cleaning to favor old growth ponderosa pine

Contractual Timber Designation Method: ITM

Mark take trees in blue tracer paint

Goals of the mark

- Retain all old growth trees and thin understory for their long-term persistence
- Where present, reduce dwarf mistletoe abundance and potential spread within the unit. Remove where possible else isolate and confine dwarf mistletoe in the unit by spacing leave trees.
- Create, retain or induce trees in clumps or in a random distribution of stems.
- Increase mean stem diameter within the stand by thinning from below

Commercial Thin

Commercial thinning should strive for the following densities and distribution:

- 1) Mark all grand fir
- 2) No marking of ponderosa pine trees >20.9 or those that indicate old growth. Use Van Pelt guide for old growth description.
- 3) Mark stand to 80 basal area target, but will range from 20-120+ ba/acre.
- 4) Utilize any clumping that may be present. This is common throughout the units.
- 5) When present, co-locate placement of low density areas with current high mistletoe presence (primarily in the upper 1/3rd of crown).
- 6) Utilize north aspects and other microsites for areas of higher density areas.
- 7) When choosing whether to leave a mistletoe tree, ensure its infection is NOT in the upper 1/3rd of the crown. Crowns may be pruned in a later step to further reduce spread within the stand.
- 8) When encountering mature ponderosa that may be >21" dbh and has a DMR rating of 3+; reduce the understory around infected trees to an area equal to twice the drip-line of the crown(s).
- 9) Ponderosa pine thinning will be generally from below unless thinning is done to "isolate and confine" mistletoe. Only choose a larger tree over a small one in order to create clumpy structure or reduce any dwarf mistletoe that may be present.

Non-saw component (trees 5-9" dbh)

The non-saw/ pre-commercial/ biomass utilization prescription is recommended where the small trees to be cut are not saw log sized material. The objective is to promote horizontal and vertical diversification, future recruitment and replacement while still reducing ladder fuels and inter-tree competition.

Selection of Leave Trees- Retain conifers on a 20' spacing.

0-5" dbh material-

Select healthy (mistletoe free, good form) trees that indicate future growth to achieve the desired spacing (170 trees per acre basis- this equates to a 16 x 16ft spacing). If not possible to select trees without mistletoe infection; the most mistletoe free trees shall be selected for leave trees. Tree health and vigor takes priority over spacing. Tree preference is to retain the healthiest disease free ponderosa pine first than lodgepole and white fir last.

Pruning

Leave trees that are left in the units may be pruned to reduce further spread into the stand. Pruning may occur up to 2/3rd of the live crown. Leave trees with more than 75% infestation may be girdled or pruned entirely for snag creation.

Prescribed Fire

These units have already had leave tree designation and thinned to desired silvicultural objectives- as such prescribed fire objectives will be utilized to reduce duff and needle cast and secondarily for snag creation. Inducing high mortality into leave trees is not the objective.

Size Class		Acceptable Mortality (%)
Name	DBH Range	Second Growth Stands/Trees
Seedling/Sapling	<5"	0 – 20
Pole	5" - 8"	0 – 20
Small 1	8" - 15"	0 – 5
Small 2	15" - 21"	0 – 5
Medium/Large	21"+	0 – 2

Preparer: /s/ William Brendecke –12/14/2015_Certified Silviculturist_____